

## Factoring & Fractions Practice

Factor each problem below completely.

A. Remove the greatest common factor.

$c^2m + 2m$	$3r - a^2r$	$mx^2 + my^2$	$-3x^2 - 3x + 6$
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B. Trinomials

$x^2 - 9x - 10$	$9w^2 - 12w + 4$	$6y^2 + 19y + 15$	$x^4 + 19x^2 + 48$
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C. Grouping

$k^2 + 2k + kt + 2t$	$x^2 - x + xy - y$	$3b^2 + 2b + 12b + 8$	$x^3 - 21 - 3x^2 + 7x$
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D. Difference of Two Squares

$x^2 - 49$	$9x^2 - 1$	$25y^2 - x^2$	$1 - 196n^6$
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E. Greatest Common Factor/Difference of Squares

$ra^2 - rb^2$	$5y^2 - 45$	$9r^2z - 16s^2z$	$2x^4 - 18y^2$
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### F. Sum or Difference of Two Cubes

$8y^3 - 1$	$a^3 + 8$	$x^6 - y^6$	$\frac{27}{64}y^3 - \frac{8}{27}x^3$
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### G. Mixed Types

$2cx^2 + 7cx + 3c$	$16x^3 + 2$	$10x^2 - 45x + 50$
$9x^2 + 16y^2$	$50c^2 - 2d^2$	$27x^3 - 8y^3$

**Perform the indicated operation. All answers in lowest terms. No mixed numbers!!!**

- $\frac{2}{3} + \frac{4}{7}$
- $\frac{1}{5} - \frac{6}{35}$
- $\left(\frac{10}{3}\right)\left(\frac{36}{15}\right)$
- $\frac{12}{25} \div \frac{24}{100}$
- $\frac{\frac{7}{8}}{\frac{5}{3}}$